

- Purification of engineering oils, removing submicron particles in transverse flow filtration - is preceded by flushing cellulosic filter using surfactant, resulting in low filtration back pressure in operation, whilst particles are entrained in cross flow, minimising deposition and blockage.

L20 ANSWER 89 OF 121 WPINDEX COPYRIGHT 2002 DERWENT INFORMATION LTD

AN 1999-036142 [04] WPINDEX

DNN N1999-027137 DNC C1999-011023

DC H07 J01 Q51

IN COMBROWSKI, Z; HAMMA, A

PA (CHWE-N) C & H WERKZEUGMASCHINEN GMBH

CYC 1

PI DE 19724172 A1 19981210 (199904)* 4p

ADT DE 19724172 A1 DE 1997-19724172 19970609

PRAI DE 1997-19724172 19970609

AN 1999-036142 [04] WPINDEX

AB DE 19724172 A UPAB: 19990127

Oil containing impurities, including e.g. suspended matter, abraded metal, grease, saponification products and talc, can now be purified in a new transverse flow filtration process.

Preferably, the cross flow filter is cleaned before taking up filtration. It is flushed, using a hydrocarbon or cold cleaning agent. The agent is an acid- or alkali surfactant, or a corresponding water/surfactant mixture. Porous membranes and/or porous plastic filters are used. The filter comprises cellulose. The filter **membrane** has pneumatic equipment, **cleaning** it with a reverse flow of air.

USE - Used to clean industrial oils, especially from metal machining, holding particularly fine particles, below 5 μ m.

ADVANTAGE - The filtration process uses the most modern technology for filtration with e.g. ceramic or cellulose membrane filters, operated in the transverse flow mode. Tenside flushing reduces the surface tension and covers the filter surface. A surprising result is the low pressure at which oil passes through the filter. A further surprising result in this mode of filtration, is that particles scarcely settle on the filter, hence rapid blockage does not occur. The particles are entrained in the cross flow, and returned to the working vessel. Oils with particles as small as 0.1 μ m can be treated. The oils of various industries, and also engine oil, are purified in this way. A typical circuit including a prefilter and instrumentation, are illustrated.

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